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The Process of Financial Liberalization in Developing Countries: Research Directions*

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I. Introduction

For the large number of developing countries undergoing significant structural transformations, one of the most important and controversial adjustment areas is that of financial markets. Of the principal broad areas facing adjustment - which also include fiscal systems, labour markets, foreign trade regimes, investment incentives, and the agricultural sector - it may well be the most controversial and difficult market to transform. There is little consensus as to when you should liberalize your financial markets or how - indeed whether - it should be done. Even Ronald McKinnon, the most well-known proponent of financial liberalization, has somewhat reversed his position on the matter and sees it as one of the last steps in the sequence towards a market oriented economy. At the extreme are statements like those of John Williamson that you should liberalize your capital markets once you become developed.[1]

Nevertheless, even if theoretically desirable, the choice of the policy maker rarely comes down to liberalize or not to liberalize financial markets. Some financial liberalization is often forced upon any country that is trying to "insert" itself in the global economy. Moreover, given the technological advances of recent decades and the trend towards globalization of markets, it has become increasingly difficult to isolate domestic financial markets from the outside. Therefore, at best the decision often boils down to how far a country goes, how fast, and in what sequence.

The purpose of this paper is not to summarize the literature on sequencing and financial liberalization, nor to offer possible new insights into the debate. Our main objective is to try and delineate future lines of productive research which could be undertaken in the general area of the liberalization of financial markets in developing countries. Our emphasis will be on the interaction of financial liberalization, the development of financial instruments, and the role of the central bank. Our main hypothesis is that for any given country financial liberalization is likely to follow a sub-sequence within the larger sequencing of structural reforms. The given sub-sequence for any country will depend very much on the state of development of financial markets and instruments as well as the role ceded the central bank with regards to monetary policy and financial

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[1] Stiglitz (1994) states that financial markets are significantly different than other markets and more prone to failure. He then discusses seven key manifestations of market failure in the financial sector, which suggests that some amount of financial repression may be beneficial until very advanced stages of the development process. Gibson and Tsakalotos' (1994) survey also argues along similar lines.

regulation. Moreover, all three of these elements are very much interrelated.[2]

This paper is organized as follows. In the next section we will give a brief overview of the experiences of financial liberalization in developing countries in the last 20 years, and attempt to put this review in the context of both a sequence of adjustments and the available targets and instruments. Section III discusses theoretical developments in the area of financial markets, focusing on the supply of and demand for assets and the role of financial intermediaries. Section IV investigates the role of central banks more precisely. The conclusion contains a summary of the discussion and an attempt to bring more focus to the most profitable researchable issues.

II. Country Experience, Sequencing, Targets and Instruments

In this section we give a broad overview of the current debate on financial reform by focusing on country experiences, sequencing of reforms, and finally on the more specific question of targets and instruments. The first four sub-sections try to generalize the experiences of four different types of countries. The fifth looks at the question of sequencing, sub-sequences, and the nature of any generalizations. The sixth examines in greater depth the importance of the notions of targets and instruments for the discussion.

Such a large number of countries have undergone some sort of financial liberalization in the last twenty years that it becomes almost impossible to try and categorize them. Nevertheless, we group some of the more important experiences in four different categories: (a) the (notoriously) famous Southern Cone experiences; (b) East Asia; (c) Sub-Saharan Africa; and (d) transition economies. The first two are separated largely due to the different macroeconomic situations in which, for the most part, financial liberalization took place. The last two are analyzed separately due to the very different institutional characteristics of their economies and financial markets vis-a-vis one another and the first two groups.

IIa. The Southern Cone

It would be difficult to find economic "experiments" which have had more disastrous results than the attempts at financial liberalization in the Southern

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[2] This hypothesis suggests that until well along in the development process, the financial sector of a typical developing country will appear substantially different than its counterpart in a developed country.

Cone countries of Argentina, Chile, and Uruguay in the 1970s. The financial reforms in these countries were very wide-ranging, including elements of the following: interest rate liberalization, dismantling of quantitative and selective credit controls, reduction of reserve requirements and barriers to entry, deregulation, liberalization of capital flows, and the legalization of US dollar accounts and transactions.[3] All three countries saw a strong increase in capital inflows due to high real interest rates which caused and were caused, in part, by an overshooting of the real exchange rate, coupled with a reluctance on the part of the government to devalue out of fear of fuelling inflation. Despite initial strong growth in financial assets, the end result was that the private financial systems ended up practically bankrupt and many banks were nationalized by the government. In fact, in all three countries the external debts incurred as a result of the liberalization were "nationalized" by the governments. The debt problems of all three countries, which continued for many years after the programs ended and are still substantial for (at least) Argentina, can be directly traced to these failed experiments.

There has been a great deal of investigation of the failure of these programs, an analysis which is made substantially more difficult due to the fact that financial liberalization was only one aspect of a package of reforms of which trade liberalization was perhaps the most important. More importantly, financial reform took place in the middle of attempts at macroeconomic stabilization. While it is notoriously difficult to separate out the effects of a stabilization versus adjustment package, in the Southern Cone case the consensus is that this is not so complex. In the 1990s, most observers agree that it is very difficult to try to financially open up an unstable economy.[4]

Given the underlying financial repression, financial liberalization, almost by definition, means that there will be a rise in real interest rates. In an unstable macroeconomic setting this has two important consequences. First, as the instability is usually associated with (if not caused by) a large fiscal deficit, higher real interest rates will enlarge this deficit by increasing the cost of the government's domestic debt. Moreover, as the size of the monetary base will usually diminish as people switch portfolios to hitherto forbidden assets, the inflation tax will decline. Second, firms, many of whom are already

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[3] See Zahler (1991) for one of many analyses of these experiments. For detailed analysis of the more recent experiences in financial liberalization of a number of South American countries, see Frenkel (1994).

[4] See, for example, the analyses of Cho and Khatkhate (1989), Dornbusch and Reynoso (1989), Zahler (1991), McKinnon (1991), and Fischer and Reisen (1992).

in a precarious condition due to the poor macroeconomic situation, will go bankrupt more readily, leading to a further deterioration of the economy as well as the bad debt portfolio of commercial banks. In the Southern Cone experience the commercial banks were next on their way to bankruptcy and were, thus, bailed out by the governments at enormous expense.

In sum, while there are undoubtedly many other reasons for the Southern Cone fiasco, it seems clear that financial liberalization in the three countries added to the macroeconomic instability and thus led to its own downfall. It is worth noting that in other countries, as diverse as Turkey and Indonesia, attempts at financial liberalization during unstable macroeconomic times have led to very high real interest rates and similar, if less devastating, results. Nevertheless, we still must ask ourselves if this is a general rule for the future. Given that in the short 10 to 15 years since these experiments ended, the nature of domestic and international financial markets has been so radically transformed, it is not entirely obvious that this lesson is still valid. For example, even many countries which are or were officially closed to international capital flows are receiving them in a substantial manner. Moreover, many economies have become partially dollarized. Therefore, it is not quite as clear as previously that you will get such large, potentially destabilizing portfolio shifts from financial liberalization. For example, the fairly broad financial liberalization in Peru in the early 1990s has not met the Southern Cone fate despite substantial macroeconomic instability. Velarde and Rodriguez (1992) attribute this result to the widespread use of dollar accounts and large amounts of illegal capital flows.

IIb. East Asia[5]

The East Asian experience with financial reform only appears good when compared to the Southern Cone disasters. Although, with the possible exception of the Philippines, there have been no tremendous catastrophes of the magnitude of the South American countries, success has also been quite modest at best. It appears to be an open question whether the success obtained was a result or a cause of the fast growth in many of these economies. It could even be argued that the good performance relative to the Southern Cone was primarily due to the more stable macroeconomic settings, rather than the results of the reforms themselves. In fact, in the two countries which attempted to liberalize financial markets in an unstable macroeconomic situation - the Philippines and

[5] In East Asia we include the non-socialist and non-transition economies of Asia to the east of India and Bangladesh with the exclusion of Japan but inclusion of Sri Lanka.

Indonesia - the results were similar to the Southern Cone countries.[6]

The rest of East Asia, except South Korea, suffered from large increases in real interest rates without the benefits of either an increase in the availability of long-term capital or a decrease in interest rate spreads. Cho and Khatkhate (1989) emphasize the importance of oligopolistic market structures - also important in the Southern Cone - which helped prevent any fall in the spreads. This brings us to a general problem of financial reform: it is often vital but difficult to introduce competition into the system. Old banks from the financial repression era are likely to be saddled with a large portfolio of bad debts, mostly steered their way by the government. Consequently, they cannot compete with foreign banks or new domestic banks, the introduction of which could endanger the entire financial system. At the same time, without the injection of a healthy dose of competition, financial liberalization may only result in massive income distribution and portfolios shifts without any significant real effects.

South Korea is considered to be the one definite success story of this group of countries in the area of financial reform. There are at least two principal reasons for this result. First, reform was undertaken very slowly. While real interest rates were allowed to become positive, they were kept at rates just above inflation. Second, it was only until more than ten years of financial reform had passed that very tough restrictions on capital flows began to be relaxed. The recent World Bank (1993) report on the East Asian miracle emphasizes that the next step in South Korean development is in the area of financial markets.

Once again, the East Asian experience forces us to reiterate two fundamental questions on the matter. First, does financial liberalization lead to growth, or vice-versa? Second, in an era of ever-increasing capital mobility, can experiences such as South Korea's be generalized to other countries with different historical and cultural backgrounds?

IIc. Sub-Saharan Africa

We have included Sub-Saharan Africa (SSA) as a separate area because, for

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[6] See Cho and Khatkhate (1989), Faruqi (1993), or Tseng and Corker (1991) for in-depth analyses of financial reform in East Asia. The latter article puts particular emphasis on the conduct of monetary policy in the context of financial liberalization. The World Bank (1993) report on the "East Asian Miracle" emphasizes enormously the role of macroeconomic stability for the success of other policies in the region.

the most part, it is a region of very shallow and/or repressed financial markets. Consequently, its problems with respect to financial reform tend to be of a different order or magnitude than in most other regions. In most countries in SSA the choice of financial assets is very limited, government bonds are of the forced savings variety, and (at least until recently) capital flows are highly restricted. On the other hand, you rarely find the extreme macroeconomic instability which has been characteristic of many Latin American countries.[7] Nevertheless, fiscal budgets are often highly dependent on the proceeds of financial repression and a large part of the total credit is directed to particular industries or sectors.

Financial liberalization in SSA countries often needs to be centred on two factors. First, there is an essential need to create new financial instruments; ie financial deepening writ large. For example, any attempt at capital account liberalization without the previous development of at least a small range of alternatives can only lead to massive outflows. (In section III we more explicitly address the distinction between supply- or demand-driven financial assets.) Second, the ramifications for the fiscal deficit must be explicitly addressed. In fact, it may often be the case that financial reform is impossible unless preceded by a major fiscal reform. The difficulty of either one of these tasks is enormous. El Nil (1992) argues that any financial reform in SSA has to be extremely flexible and non-dogmatic. It should not be on a definite timetable, only move as fast as events allow. Moreover, he argues that due to the pressures on the fiscal deficit, it is likely that substantial external support will be necessary at the beginning.[8]

IId. Transition Economies

Given the caveats noted in the previous subsections with regards to financial liberalization - that is, the need for macroeconomic stability and institutional development - it may seem somewhat facetious to speak of the matter in the context of a transition economy. Where are the financial markets that are to be liberalized and upon what property rights are they based? If these exist, the macroeconomic situation is often so fragile that it is impossible to move on

[7] See the book from the African Centre for Monetary Studies (1992) for a discussion of the problems of financial reform in Africa along with a number of case studies.

[8] The more specific problems of monetary unions are discussed in the section on central banking. For a measure of the fiscal and other impacts of excessively controlled credit allocation systems (in the case of the franc zone) see Medhora (1992 and 1993a).

this front. Nevertheless, attempts are being made to reform and create financial markets in transition economies. Such reforms face different problems and urgencies than in other developing countries.

Although the policy maker's preference may well be to keep financial reform on the backburner, he or she is often driven by other considerations, especially the need for foreign capital. In order to attract the large capital injections needed in most transition economies, it is often necessary to open up the capital account. This implies that in order to retain domestic savings, domestic financial markets must be liberalized to some extent. Along with weak institutions, the country has all the risks mentioned previously, such as very high real interest rates and overshooting of the exchange rate.[9]

In general, however, the problem of financial liberalization in a transition economy is of quite a different nature than in other developing countries. This is a direct consequence of the structure of financial intermediation in the socialist era. The vast majority of credit was directed from the (nationalized) commercial banks to the firms. Many, if not most, of these firms need either to be closed or massively restructured. Moreover, due to large amounts of inter-firm arrears, bankruptcy of individual firms can easily have a domino effect, with the result being that the central bank is forced to refinance insolvent firms or face even greater macroeconomic instability. As firms are privatized, the number of bad loans in a typical bank's portfolio increases correspondingly. Consequently, in order to avoid bankruptcy themselves, many banks have to support "bankrupt" firms with new lines of credit. If the banks are privatized, they will quickly go under due to the large portfolio of bad loans. Attempts to instill competition into the banking system via new banks will result in a very uneven playing field.[10]

IIe. Sequencing

There is a large and growing literature on the optimal sequencing of structural adjustment reforms.[11] Before entering the sequencing debate, three

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[9] See Fanelli and McMahon (1994), Perotti (1994), or Caprio and Levine (1994) for a discussion of the difficulties of financial liberalization in the transition economies of Eastern Europe and Russia.

[10] See Levine and Scott (1993) for a discussion of the bad loan problem of East European transition economies.

[11] See, for example, McKinnon (1991) and Fanelli and Frenkel (1992).

points should be made. First, as emphasized by Fanelli and Frenkel (1992), while it may be theoretically convenient, it rarely is practical to distinguish between stabilization and adjustment, as in unstable economies they usually depend on one another. Second, in some markets and in some circumstances there may be a sub-sequence of adjustments. We think that this is particularly true for financial markets, where reform has to be integrated with the general development of the economy and its institutions or the country could be exposed to very high and unnecessary risk.[12] This suggests that it may be necessary to discuss sequencing of financial reforms both in terms of where they fit in the grand scheme of things, as well as the optimal sequence of financial reforms themselves. Third, financial reforms can have very large distributional effects. Therefore, reforms which seem technically desirable may not be possible for political economy and/or income distribution grounds.

The discussion in the preceding sub-sections points to a gradualist approach to financial reform in contrast to a "big bang".[13] In the subsection on transition economies, however, it was also indicated that at times you may have to run despite a lack of proper "conditioning". The discussion also indicates a sceptical attitude towards any uniform or formulistic approach to the sub-sequence of financial reforms. These will depend very much on the existing institutional regime, how easily it can be developed or adapted, the sequence of other reforms, the convergence of financial reform with these other reforms, the role and importance of monetary policy, and the path followed by the basic macroeconomic equilibria.[14] At best, we hope that some generalizations can be made about the reforms needed in countries at similar levels of development and that those lagging behind can learn from the experience of their predecessors.

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[12] See Leite and Sundararajan (1990), Roe and Popiel (1987), or Wong (1991) for three possible sequences of financial reforms. In a closely related area - at least for countries dependent on financial repression and inflation taxes - McMahon and Schmidt-Hebbel (1994) argue along similar lines with respect to fiscal reform.

[13] Note that we are not arguing for or against a big bang in the sense of opening up a broad front of reforms at the same time. We are suggesting that to date the evidence and professional consensus is leaning towards a cautious introduction of the series of financial reforms which would be desirable in a new equilibrium.

[14] For example, if financial liberalization leads to an (overshooting) exchange rate appreciation due to capital inflows, then governments which are net international debtors will find their fiscal positions improving at the same time as their current accounts deteriorate. The relative magnitudes of these swings could dictate the next moves in the reform process.

The debate on the correct sequencing of financial reforms cannot avoid the even more complex one on whether finance leads development, or is a result of development. We suspect that the answer to this question may also be country-specific and not generalizable over time for a given country. That is, as a country progresses, it will eventually reach a point where particular financial reforms are necessary before it can advance much further.

IIf. Targets and Instruments

In the preceding discussion we have focused almost exclusively on the direct role of financial liberalization in the investment, savings, and growth processes, with only slight reference to its indirect role via monetary policy. However, as liberalization progresses, the nature of both, the instruments and targets, of monetary policy changes along with the financial system. On one hand liberalization opens up new possibilities for government management or regulation of the financial sector (and, indirectly, the economy). On the other hand, it gives citizens more room to manoeuvre with regards to their own portfolios, and, hence, their collective behaviour is harder to control. That is, the brave new world open to monetary policy makers may be of little consequence if they are not able to use their new instruments to reach specific targets. Tseng and Corker (1991) catalogue the difficulties which faced Asian policy makers during periods of financial liberalization both with regards to defining desirable targets (as monetary aggregates shifted and often became very unstable) as well as using their new tools to reach these targets.

Financial liberalization, especially in its most extreme form in the context of a small open economy, may well diminish the role of monetary policy to the relatively minor one (from a historical perspective) of maintaining low inflation and, perhaps, a stable real exchange rate. For example, by eliminating credit rationing and opening up foreign capital flows, the interest rate becomes very much tied to international rates and the monetary authorities lose a historically important channel of selective intervention. Of course, the way all of this will play out in practice will depend very much on the new role ascribed to the central bank, as discussed in Section IV.

Finally, we conclude this section by emphasizing that what are instruments to monetary policy makers are very much financial assets to wealth holders. The types and variety of such assets will have important effects on portfolio shifts, including capital flows and dollarization. Hence, they can play a stabilizing or destabilizing role, depending on the source of any shock to the economy. Damill and Fanelli (1988) argue that in order to understand the effects of monetary policy, particular attention has to be paid to the manner in which private agents, not just governments, finance their deficits. For example, in

Argentina in the early 1980s the credit squeeze was partially avoided by large firms borrowing abroad and then lending to smaller firms.[15] While Roe and Popiel (1987) argue that financial deepening is one of the most important factors in dampening the response of a country to external shocks, McNelis and Schmidt-Hebbel (1992) emphasize that bad domestic policies will have stronger repercussions in an economy with liberalized financial markets.

III. Asset Markets and Financial Intermediation

This section places the issue of financial liberalization in LDCs in the context of developments in the relevant aspects of the literature on asset markets and financial intermediation. Although the aim of this project is practical and policy-oriented, the need for sound theoretical underpinnings of policy analysis and advice is self-evident. Still, the idea here is not to present a series of lectures on financial economics, but rather, to situate financial liberalization in LDCs in the larger literature on the functioning of financial markets and players.

Three broad areas of enquiry may be delineated - the supply of assets, the demand for assets, and the intermediation that brings about equilibrium.

IIIa. The Supply of Assets

The distinction made in this section between asset supply and asset demand is somewhat forced. In fact, the bulk of the debate and intellectual advances have been concentrated on the demand side - specifically, on perspectives on modelling an agent's utility-maximizing demand function for assets (both financial and non-financial). The supply side is almost considered as passively responding to the needs of the market.

Still, although, for example, the growth in the supply of near-monies, derivatives, and other "exotic" financial instruments may be seen as largely the response of profit maximizing firms to the needs of asset consumers, the role of lower transactions costs (ie. improved technology) and a more accommodating

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[15] In a somewhat less sophisticated manner, a similar situation exists in many of the transition economies, often with large negative repercussions for stabilization policy. As Levine and Scott (1993) argue, firms lend to their suppliers in order to keep them viable as there are no other obvious sources of inputs.

institutional and legal environment in this process cannot be ignored.[16]

In the LDC context, a number of avenues present themselves. One would be to suggest that despite liberalization, the immediate research issue in LDCs is not the control of a dizzying spiral of assets, as the expansion is likely to be within "conventional" limits of customer needs and choice. A second would be to argue that when it comes to asset supply, LDCs are "takers" of the wide array of existing types of assets, which, in a deregulated and global environment, will present themselves as the need arises. That is, there is no particular aspect to asset supply in LDCs which cannot be covered by the available stock of assets that are known to market participants. Both of these points suggest that the research issue, if any, is simply to acknowledge the existence of a pool of assets in the international financial market place, from which LDCs may draw, and that, perhaps, the regulatory aspects of this flow might merit some attention.

A third, and more pro-active, approach would be to argue that the interaction between LDC needs in a deregulated environment and the international supply of assets does, indeed, merit considerable attention, not only on the regulatory side, but also on the matter of the mix of types of finance that emerge in a post-liberalization environment, and the process by which types of assets are either "created" indigenously, or imported, for domestic use.

Finally, the role of the market for government bonds during financial development and liberalization should be flagged. A wide market for government bonds plays a crucial role in providing signals to the rest of the financial markets. Specifically, the existence of a strong market for government bonds helps to provide a term-structure of interest rates which acts as a frame of reference for the private sector. For example, in the U.S., the benchmark for long term interest rates is the thirty-year government bond rate and for the short term the treasury bill rate. If the market for government bonds is thin and/or weak, the markets signals sent to the rest of the financial sector will also be weak and unreliable. This raises the level of uncertainty in the trade of financial instruments. Indeed, from a theoretical point of view, it is very difficult to conceive of the CAPM without the "risk-free" rate provided by government bonds.[17]

Another, and wholly different strand of thinking will be briefly mentioned here. The increase in the availability and use of assets potentially makes the job of controlling monetary aggregates more complex. This issue is taken up in the next section, on central banks and financial liberalization.

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[16] See, for example, Rose (1993) and Financial Times (1993) for accounts of the overall environment within which the explosive growth in the number of financial instruments has flourished.

[17] We owe this point to José Fanelli.

In any case, these are practical or empirical matters, and theory has little to say about these issues.

IIIb. The Demand For Assets

This topic has a long lineage in the literature. A brief overview would cover the existence of a simple form of "money" in the agent's choice set, to more sophisticated elaborations of this set. Thus the set may be expanded to include more forms of "money", in which different assets embody the characteristics of transactions and speculative motives of holding them to varying degrees. The set may be further expanded to include non-financial assets, including land, and human capital. Finally, the story may be completed with the explicit inclusion of uncertainty, transactions costs and a dynamic setting, to bring us to current perceptions of asset market and portfolio equilibrium.

Surveys of developments in the area of asset markets and the demand for money may be found in Goldfeld and Sichel (1990), McCallum and Goodfriend (1987), Barro and Fischer (1976), and Hakansson (1987).

Starting with the Fisher Identity ($MV \equiv PT$), and the seminal work of Hicks and Keynes[18], the classic view of money demand as encompassing a transactions, precautionary, and speculative motive still prevails, albeit with substantial refinements in each branch.

Baumol (1952) and Tobin (1956) pioneered the inventory approach to money demand. Its emphasis on transactions ("shoe leather") costs and economies of scale has significant empirical implications if, in fact, financial liberalization can be linked to changes in the relevant technology in the financial sector, and therefore, to changes in transactions costs as defined in the Baumol-Tobin framework. Miller and Orr's (1966) re-working of the Baumol-Tobin approach is seen by Goldfeld and Sichel (1990) as being "extremely useful for analyzing the consequences of innovation in cash management techniques" (p. 309).

The standard contemporary references for viewing money as one element in a more general portfolio equilibrium are Tobin (1958) and Friedman (1956). Extensions to this approach may be broadly classified as follows.

Ando and Shell (1975), Fama and Farber (1979), Brunner and Meltzer (1971), and King and Plosser (1986) incorporate uncertainty into the basic framework. Wallace's (1980) overlapping generations approach has proved to be problematic,

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[18] For the record, see Hicks (1935 and 1939) and Keynes (1930 and 1936).

as has the cash-in-advance approach attributed to Lucas (1980) and Svensson (1985).

In any case, the theoretical developments in this area, along with the financial deregulation and innovation in, primarily, the U.S., in the late 1970s spawned a growth industry in more and more complex techniques of empirically testing the validity of the various theoretical hypotheses. This literature is reviewed in Goldfeld (1987) and Goldfeld and Sichel (1990). Leaving aside the very detailed and complex empirical formulations contained in this body of work (which, in any case, is constrained by data availability in most countries), attention should be paid to the literature on whether money demand becomes unstable and unpredictable in the face of developments in the financial sector.

Finally, as the range of financial assets available to agents increases, the degree of "moneyness" embodied in each varies to the point that traditional notions of what is or is not money (and whether or how it's supply should be regulated) inevitably lead to the Divisia literature, à la Barnett (1980) and Spindt (1985), where monetary aggregates are broken down into weighted components. The implications for policy of the notion that simple aggregation of components gives a misleading notion of money supply are many, and have not been fully explored, particularly in the LDC context.[19]

Clearly, many and large swaths of the literature on money and finance have been condensed into a few salient strands, in the preceding paragraphs. It seems appropriate that the determining factors on what should or should not be examined in this project should be [a] the link with an actual or potential financial liberalization, [b] policy relevance, for an LDC, and [c] data availability.

IIIc. Financial Intermediation

Financial intermediation may be considered the gamut of institutional arrangements within which savers interact with borrowers, thereby creating equilibrium in the financial sector. A principal determinant of the size and scope of the financial intermediation sector is transactions costs, which, in turn, may be said to be driven by improvements in communications and other technology, and legal impediments to trade in financial instruments. While changes in the relevant technological parameters, particularly in LDCs, may be assumed to be "exogenous" (or readily importable), the legal and institutional financial environment is directly related to the nature of the financial liberalization.

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[19] An exception is Dhliwayo (1992). For a recent survey see Ford et al (1992).

The impact of financial deregulation and innovation on monetary policy in the North American context has been alluded to already. The literature in finance considers a number of related issues, which are surveyed in Merton (1990).

First, while the theoretical literature derives conditions under which new financial instruments will be created (essentially, to help agents diversify risk), in practice, the interaction in LDCs between customers and financial firms, and the institutional environment within which they operate, may shed light on the process of financial market deepening and widening. How are new instruments created? What are the links between market structure and transactions costs? Should a financial liberalization consciously target intermediaries for "infant industry" nurturing, to promote indigenous market development, or will this come about from market forces alone?

Special attention should be made to the overall approach to creating financial markets and intermediaries in LDCs. Should the Anglo-Saxon model of equity-based financial systems be encouraged, or should the German and Japanese bank-based models be encouraged? Singh's (1993) survey comes out in favour of the bank-based model, but the more general lesson here is that particular conditions in the country in question should determine the ultimate prescription, not a general statement of principle of the intrinsic superiority of one model over the other.

Second, there is a large literature on the potential destabilizing impact of "far too advanced" technology in the financial sector. Witness, for example, the debate over the role of program trading and derivatives in market instability, covered in Part 2 of Miller (1991). Few, if any, LDC financial sectors have reached the "sophistication" of the North American or Western European bourses, but similar questions, adapted to local conditions, may usefully be raised.

In the case of LDCs, where financial sectors are still relatively underdeveloped, an additional issue arises. If there is an asymmetry among the key players, then the potential for destabilization exists. One example is the impact on exchange rates and reserves when capital is more mobile internationally than it is within a country. This can and does happen when the domestic financial system is not as well developed or integrated as one or a few national financial centres are with the international financial system.

Such a scenario has two likely implications. The first is if the inefficiency of the domestic recording and other back office functions allows some agents to take advantage, either legally or illegally, of the slowness of the system.[20]

The second is if the imbalance between international and intra-national funds movement makes exchange rates and reserves more unstable than they would have been had the domestic adjustment mechanism been up to speed.

An alternative formulation of the asymmetry would be when foreign banks or financial houses operating within an LDC have access to more advanced technology (or other means) than their domestic competitors. This has implications for the development of a domestic financial sector, and methods of industry regulation.

Gurley and Shaw (1960) develop the analytical framework that is still used in examining the development and regulation of financial intermediaries. The behaviour of financial intermediaries and their choice of assets and liabilities is covered in Journal of Money, Credit, and Banking (1980), while Tobin (1987) and Fry (1988, particularly chapter 10) contain useful discussions of the institutional and regulatory aspects of the financial intermediation sector. Eaton (1994) examines the conditions under which financial centres develop or exist. He finds that countries that "export intermediation services to the rest of the world" typically have lower inflation, deeper financial systems, less government revenue from seigniorage, and lower reserve money requirements than countries that do not contain banking centers.

Finally, no account of the issues involved in financial intermediation in LDCs is complete without taking into consideration the existence and role of the informal financial sector. A good discussion may be found in Parts I and II of Coats and Khatkhate (1980). An attempt to reconcile traditional and structural views of the formal-informal sector dichotomy in LDCs in a theoretical framework of plausible intermediary behaviour may be found in Bencivenga and Smith (1992).

IV. Central Banks and Financial Liberalization

This section takes up three topics. First, the development of central banks is situated in the larger discussion of their evolving role through history, with particular reference to relations vis-a-vis the rest of the financial sector. Next, central banking and the process of financial liberalization is discussed in light of the literature on time consistent policy, and the central bank independence debate. Finally, the role of central banks, and the nature of their operations, in the specific context of LDCs - where

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[20] This is one of the reasons given for the scandal in 1993 in the Indian financial system.

financial liberalization is often "forced", and conducted in the midst of globalization and capital market crisis - is discussed.

IVa. A Historical Perspective

Today, five broad functions may be attributed to a central bank. It is: [1] banker to the government; [2] banker to domestic financial institutions; [3] regulator of the domestic financial sector; [4] responsible for currency issue and management of international reserves; [5] responsible for the operation of monetary and credit policy. These, in turn, may be classified, in the manner of Goodhart (1987), as "micro" (functions 1-3, but particularly 3) and "macro" (functions 4 and 5, especially 5).[21]

However, this has not always been the case, and even today, significant exceptions arise, of which more below.

The earliest central banks had the overriding objective on the part of the Crown of deriving, or gaining control over, the pecuniary benefits of money creation, that is, seigniorage.[22] The macro issue of controlling money and credit was left largely to the viscitudes of specie flow and availability, and debasement. Once founded, the science and art of central banking evolved into what it is today. So long as some central banks, such as the Bank of England, remained in private hands, or had significant commercial banking functions, there was a competitive conflict of interest in such a bank also fulfilling a function of banker to or supervisor of the rest of the financial system, and in particular, the function of lender of last resort.

As central banks took on the role of lenders of last resort, they brought to the fore the notion of "insurance", and this, in turn, raised the spectre of "moral hazard." That is, if commercial banks conducted their activities secure in the knowledge that all or a portion of their losses would be covered by the central bank, then the only effective guard against commercial banks who thus

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[21] A sixth function, that of promotion of financial development, may be added in the case of LDCs. Rather than seeing this as belonging to either the "macro" or "micro" sphere, this may be considered more as an overarching aim that underlies all central banking operations in LDCs.

[22] The world's first "central" bank is generally considered to be the Swedish Riksbank (1668), followed by the better known and better studied Bank of England (1694). Besides Goodhart's (1987) concise account on the matter, more detailed analyses of the evolution of central banks is contained in Timberlake (1978), Sayers (1957), Bagehot (1873), Hawtrey (1932), and Smith (1936).

took undue risks (or worse) was to also vest in the central bank the relevant regulatory and supervisory powers. This also meant that central banks shed their commercial wings as they took on their insurance and policing powers. With the exception of the cogent and lively objections of the Free Banking school, this change in course for central banks was widely accepted in society.[23] Interestingly, while Free Banking is not taken particularly seriously anymore (except in restricted circles), the notion that central banks should be divested of their regulatory and insurance responsibilities has gained much credence, as will be seen in the next sub-section.

By and large, central banks in LDCs reflect the historical and related ties that have existed in the region and the outside. Moreover, the large majority of central banks, particularly in Asia and Africa, date to the period 1947-65, reflecting the time of independence from colonial or outside rule. Therefore, these central banks also reflect the "state of the art" and other mores prevailing at the time of their creation. Their evolution since then may have had an indigenous flavour, but these points may be noted here: unlike the long lineage and evolutionary nature of central banking in Europe and North America, central banking in LDCs has a rather compressed history that [a] "began" at a specific point in time and with explicitly received charters and responsibilities, and [b] having begun on the model of the metropole, has either evolved little, or evolved in response to crisis, or external advice, often pressure.[24]

In this respect, Collyns' analysis of central banking in LDCs is instructive. Besides the evident point about these central banks reflecting, until recently, historical imperatives and arrangements, they typically have "many" functions (with obvious repercussions on financial sector control and liberalization) because of [a] the shortage in many countries of the required technical expertise, and [b] the subsumption to the needs of "national development" of the various societal institutions and traditions. Both point to large and powerful central banks, given very many tasks, in a general environment of dirigisme. The gamut of controls, regulations, and distortions that have come to characterize many LDC financial sectors - all of which may fall under the broader implications of the moniker "financial repression" - and which financial

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[23] For a flavour of the debate and case for Free Banking, see White (1984) and Dowd (1992).

[24] Historical accounts in the tradition of the European literature, of central banking in LDCs, are few. Some central banks, such as those in India and Nigeria, have commissioned studies of their development. Outside the former sterling orbit, Julienne's (1988) account of the early years of the franc zone stands out as being in the grand old tradition of monetary history.

liberalizations now have undone or are attempting to undo, should thus come as no surprise.

Still, in terms of the work of this project, it would be instructive to examine, as case studies, the links between central banks, their creation and evolution, and their relationship with the rest of the financial sector, both through history, and in contemporary (ie. crisis and SAP) terms. A perspective in three broad regions - the sterling legacy, the franc zone, and the Latin American situation - would be interesting and, judging by the paucity of current such literature, unique.

Collyns (1983) deconstructs LDC central banks into these groups: [a] transitional central banks; [b] supranational central banks; [c] central banking in currency enclaves; and [d] central banks in extremely open economies.

From a first principles approach, one has to be clear on the rationale for a central bank in a particular country or region, keeping in mind the exigencies of the prevailing situation. Even if the medium-to-long term prognosis is one of near-perfect capital mobility and globalization of markets, it need not follow that Collyns' taxonomy has been superseded by his case [d].

For one, while his example of case [a] had to do with the transition from currency boards to nationally autonomous central banks, the current analog to such a transition would be the case of the countries of Indochina or Cuba, or even more appropriate to the currency board comparison, the countries of the former ruble zone. Similarly, the analog for currency enclaves could be countries that opt for a rigid and (reasonably) credible peg, as many Latin American countries, notably Argentina, have done. Nor is supranational central banking passé. Besides the obvious examples of the franc zone and the eastern caribbean (not to mention the EMS), it is likely that moves towards enhanced regional integration in many parts of the world would, at some point, have to involve, at least, harmonization of certain laws relating to banking, finance, and capital, and at most, regionally co-ordinated monetary policy.

Whether central banking history as it pertains to financial liberalization should be seen in strict regional terms, or in a more functional or characteristics-based manner, is for the project planning group to determine.

IVb. Time Consistency and Central Banking Independence

The most important development in the contemporary practice of central banking is the emphasis on rational agents and credible policy. This section will not go into the intricacies of the huge literature on the rules versus discretion debate, save for citing the "standard" reference on time consistency, Kydland and Prescott (1977), and the relevant central bank independence literature.

The time consistency approach is more appealing that the debate on rules versus discretion because it makes a simple yet powerful observation - what matters is not whether rules are "superior" to discretion, but rather, whether a policy announcement, be it a rule or discretion, is credible. The most forthright manner in which a policy can be made credible is to couch it in an institutional environment whereby the policy announcement is "locked in", once made. In other words, a rule is meaningless if it can be easily altered; discretion may be particularly coherent if it is formulated in the right manner, by the right people. A policy announcement is made time consistent, then, if the costs of backtracking are high, and widely seen to be high, no matter whether such announcements follow a particular theme, or are discrete and individually disparate.

In the context of the formulation of monetary policy, time consistency has been interpreted to mean that [a] the credibility of the monetary authorities matters more than whether or not they announce the adoption of "monetarist" or any other principles; and [b] this credibility is enhanced when the central bank is distanced from the rest of the machinery of government.

Empirically, the success of independent central banks has been taken to mean low inflation rates, and, sometimes, low costs, in terms of lost output, of fighting inflation (ie. a more inelastic Phillips curve[25]). The weight of the empirical evidence is in favour of the central bank independence hypothesis, and this may be found in Grilli et al (1991), Cukierman et al (1992), Cukierman (1992), Swinburne and Castello-Branco (1991), and Banaian et al (1983).

Despite this, at the macro, inflation-output level, the debate is far from concluded, and this is not the place to delve into it. Suffice to say that a number of issues remain to be addressed: [a] do independent central banks bring about low inflation, or do societies pre-disposed to monetary discipline more easily accept independent central banks? [b] do we have a long enough track record and among enough countries to make a proper determination on the matter, and, related to this [c] does it follow that extending independence to central banks in a host of countries around the world will "result in" lower inflation rates ie. is independence either a necessary or a sufficient condition for success in the fight against elastic Phillips curves?

The macro-level issue outlined above does impinge on more sectoral and financial liberalization issues, but this has not received the same attention among researchers as the larger debate. Principally, two issues should be addressed.

First, what are the links between successful financial liberalization and

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[25] à la Lucas (1973) - that is, the more inelastic the Phillips curve, the smaller the rise in unemployment for a given reduction in inflation.

independent central banks? More generally, what constitutes time consistent policy when it comes to dismantling and rationalizing the apparatus of repressed financial sectors? Clearly, credibility in, say, de-nationalizing a banking system, or attracting funds into it, or improving the quality of its lending requires that the policy move be well announced and permanent. But is there more to it than that? What are the characteristics of the enabling environment within which successful financial liberalization occurs, and how does the central bank, independent or otherwise, fit into this schema? How important is the rate of inflation (and perhaps more importantly, its variability and predictability) before, during, and after a financial liberalization?

Second, what is the interplay between extending a central bank's statutory independence, its actual independence, and its somewhat traditional role as regulator of and lender of last resort to the commercial financial system? The literature, even for the Fed and European countries, is mixed or silent on this matter.[26] "Classic" contemporary statements on the need for and operationalization of central bank independence, such as Fair (1979) and Burns (1977), concentrate on <u>distance from government</u> in their characterization of independence, and here, the nature of appointment and duration of term of senior management, or statutory objectives, for example, get much attention.

Empirical measures of independence, too, concentrate on such criteria. Only Grilli <u>et al</u> (1991) explicitly consider "banking supervision <u>not</u> trusted to central bank, or central bank alone" as counting <u>towards</u> more independence. The logic here is as follows. By delegating supervision to a separate entity, and leaving solvency finance issues to a private and fully funded deposit insurance scheme, there is less pressure on a central bank to step in and "save" a bank or banks (ie. irate depositors) in crisis, by monetizing the losses, and thus violating a credit and inflation ceiling.

But in LDCs, where even middle income depositors may be poor, and - as in Africa and Central America - increasing democratization makes governments particularly responsive to such public pressure, would divorcing central banks from their financial sector roles work? If so, how best to design a system of independent central bank, credible public supervisor, and actuarily sound insurance system? If not, what are the alternatives? What is to be learnt from the experience of the Southern Cone countries during the early 1980s, as well as

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[26] One recent exception is Heller (1991), who argues in favour of a limited mandate for the central bank, in this regard. McCallum (1994) uses simulations of U.S. data from the 1970s and 1980s to suggest that a central bank can adhere to a monetary policy rule while also fulfilling its function as a lender-of-last-resort.

more recent episodes in South Korea, Malaysia, and Indonesia?[27] More generally, how "chinese" are the walls in countries where the relevant supervision and insurance functions are entrusted to bodies other than the central bank? Is this a part and parcel of financial liberalization, and if so, should it be? Everywhere?

IVc. The Money/Credit Process and Financial Liberalization

To make a proper evaluation of financial liberalization, ultimately, the proverbial short and long runs, and the adjustment path from one state to the next, will have to be delineated. The evidence and discussion alluded to earlier in this paper strongly suggest that financial liberalization reduces distortions and rent seeking behaviour in the credit markets. The jury is likely still out on the larger and related questions - do liberal financial sectors foster financial development better than illiberal ones, or not; and, is some degree of dirigisme necessary to put in place the pre-conditions for financial development before it is best left to the forces of the market place to take over the process of widening and deepening?

While the issue of financial development has some central banking overtones, this section deals with a separate point - how is the money and credit creation process, and more generally, the conduct of monetary policy, affected by financial liberalization?

Two broad strands of thought should be distinguished here. The first is political economic, and derives from the "political business cycle" approach

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[27] In this respect, the case of la Banque Centrale des États de l'Afrique de l'Ouest, or BCEAO) is instructive. Using the criteria set forth in Grilli et al (1991), Medhora (1993b) finds the BCEAO to be very independent - easily in the top third of OECD country rankings, and likely the most statutorily independent central bank among those in LDCs through much of its history. While this did produce an enviable inflation performance until the early 1980s, the macro-economic problems of the BCEAO region are well known (culminating in the devaluation of the CFA Franc in January 1994), and most countries in its purview have had troubled financial sectors. The BCEAO is no longer solely responsible for the commercial financial system, but it remains to be seen how "chinese" the walls really are. For a discussion of recent financial sector crises, see Sundararajan and Balino (1991), which contains case studies of Argentina, Chile, The Philippines, Thailand, and Uruguay. Akyüz (1993), in a survey that is on the whole sceptical of "doctrinaire" financial liberalization, comes out in favour of retaining control of several aspects of the financial sector, on prudential regulation grounds.

starting with Nordhaus (1975), and comprising, as notable contributions, Frey and Schneider (1981), Waller (1989), Alesina (1989), Cukierman and Meltzer (1989), and Roubini and Sachs (1989). The gist of this line of thought is that macroeconomic aggregates are, not surprisingly, responsive to political and social institutions and changes in a country. One example has already been noted in the previous section - pressure to compensate the losers from a financial sector failure may affect credit targets, the degree of affectation depending on the degree of independence of the central bank and related bodies.

In this section, one would simply add that the impetus for, and speed and nature of, the financial liberalization itself is endogenous to the political economy of a country, buffeted, to a greater or lesser extent, by external pressure for stabilization and adjustment. So, how financial liberalizations come about may be worth studying, in various cases.

But from this, a second, and more technical matter arises. Simply put, how do the relevant money and credit multipliers behave during and after liberalization, and, particularly, as capital markets become globally or regionally integrated, and widen and deepen (ie. as the number and nature of financial instruments increases?) And how does this affect the conduct of monetary policy by the central bank, independent or otherwise?
Brunner (1987) states:

> Money is still best defined in the classical tradition to refer to any object generally accepted and used as a medium of exchange. Financial innovations associated with technological or institutional changes do not modify this definition. They do change however the empirical counterpart of the definition and this requires intermittent changes in the measurement procedures for the nation's money supply.

That said, it is not clear, except in very broad terms[28], how changes brought about by financial liberalization affect the various monetary aggregates, as well as their components. Consider the most basic identity that links the activity of the central bank with "final" money creation: $M = B(1 + c)/(r + c)$, where M is narrow money (currency + demand deposits), B is base or "high powered" money (currency + reserves), c is the currency deposit ratio, and r is the (actual) reserve ratio.

More elaborate formulations of this identity may be found in Frost (1977) and Cagan (1965). But even at first blush, it is apparent that none of the

[28] And sometimes not even then. Brunner and Meltzer (1990) give the example of the U.S. in the 1970s, when the introduction of credit cards and other money substitutes was said to result in demand for conventional money (currency and demand deposits) going to zero, with monetary velocity approaching infinity. "Shortly after these predictions, monetary velocity declined." [p. 358]

components of the identity are impervious to change, as a financial system, suddenly or partially, by evolution or by fiat, changes. Freedman (1983) outlines and measures the impact of innovations in the Canadian financial sector during the 1970s on money demand and interest rates, and then, the feedback to money supply. A similar exercise for a liberalizing LDC could hold lessons for it, and others.

Once it is established (or estimated) just which aggregates are likely to change during and after liberalization, and how (ie. what new financial assets are likely to be introduced), it remains to be determined how the central bank's open market operations are likely to be affected by the change. Finally, the issue of monetary control could then be addressed.

Johannes and Rasche (1987) address this issue empirically, for the U.S. Their framework may be portrayed thus: degree of control = $1/V[M - M^*]$, where the denominator signifies the variance of the forecast error for money, which is conditional on the choice of policy variables and the institutional regime. Essentially, they assume that the money base can be controlled by the central bank, but that the money multiplier is unstable, and outside the central bank's immediate control. By breaking the money multiplier into its constituents, and estimating a time-series model for each constituent, they build an estimated money multiplier, which they test for robustness. The estimate may then be used to forecast money supply in the economy, whose periodicity depends on that of the underlying available data.

For the U.S. during the late 1970s and early 1980s, it is found that there is no evidence to suggest that forecast errors increased during that period of financial deregulation and innovation, with one significant exception - the spring of 1980, when President Carter imposed credit controls. One might surmise from this that some forms of control or de-control, and the speed with which they are imposed, matter, when it comes to the activities of the central bank in making and implementing monetary policy.

A similar study for a group of LDCs could yield useful results. The qualitative evidence for LDCs, although not huge, does exist, as in Caprio and Honohan (1991), World Bank (1989), Wong (1991), and Callier (1991). But the next step, to empirically and rigorously link financial liberalization (and resulting innovation) with the practical conduct of monetary policy in LDCs, has yet to be taken.

To summarize the results of this section, a set of studies could: examine the history and evolution of financial sector regulations and structure (ie. why did they come to be what they were on the eve of liberalization); relate the enabling environment, particularly moves to make the central bank more independent, to the success or otherwise of the liberalization; and empirically link changes in the money creation process to the general conduct of monetary policy and central bank operations.

It remains to be determined whether each of these issues should be tackled for each case study, or whether a more dispersed approach should be taken.

V. Conclusion

This section brings together the discussion of the previous pages, and suggests several areas that could be explored in future research. The idea here is not to put a point on every detail of the project, whose scope is to be determined by the researchers themselves. Rather, questions, many of which have already been posed in earlier sections, will be raised which indicate future directions of research.

The aim of this paper has been to discuss financial liberalization [a] in view of the experience of countries that have already gone some way in liberalizing their financial sectors, and [b] by situating the research issues in their theoretical and practical context.

The theoretical context includes developments in our understanding of asset markets and how they work. In this paper, the practical context has largely been taken to mean the central banking and monetary policy milieu within which (and often by which) a financial liberalization is conducted.

If there are just a few salient lessons to be learnt from the experience of financial liberalizations to date, they would have to include these two: [a] initial conditions (ie. level and state of the financial sector) matter, and [b] the overall macro-economic environment within which the financial liberalization occurs matters. The gist of the discussion of section II was that a country liberalizing under "southern cone" conditions is likely to have an experience quite different from that of a country under "sub-saharan African" or "transition economy" conditions.

But what exactly characterizes each initial state, and, leaving aside somewhat bald geographic generalizations, what can we reasonably say about the path and/or state dependency of a financial liberalization once we have identified the characteristics of the starting point? How do, say, a stable macro-economic environment, well developed system of property rights, and relatively wide and deep pre-existing capital market stack up with respect to each other when it comes to assessing the chances of success of a given financial reform? Should the over-riding objective in, say, financial reform in Benin or Vietnam or India be the development of a properly functioning system of institutions and property rights, increasing the availability of assets, putting in place a proper regulatory framework, or stabilizing other parts of the economy?

José Fanelli points out that from an analytical point of view, there is very little literature on the sorts of dollarized or bi-monetary systems found in many Latin American countries. The problem is analytically interesting because in addition to foreign assets, there exist three domestic assets instead of two (ie. money, domestic "peso" bonds, and dollarized domestic assets.) Several research issues present themselves in such a situation. For example, what are the effects on targets and instruments of monetary policy? Is it possible to have an "independent" monetary policy? Is the central bank's regulation of a dollarized system different from a traditional one? What are the effects on the process of asset creation?

Whatever the answers to these and related questions, it is apparent that the supply and demand sides of asset markets do not function in isolation of each other or the global economy. While it is understood that the progress of financial liberalization involves a widening and deepening of capital markets, little is known about the process of asset accumulation and new asset creation. This issue is particularly important as financial markets in some well developed centres produce readily exportable types of assets which others may choose to import, rather than indigenously develop. In either case, the matter of regulation of asset creation and/or movements in an environment of falling transactions costs and (therefore) near-perfect capital mobility remains a policy issue in all countries.

The subject of regulation, in turn, leads to the role of the central bank in modern economies. Section IV identified several questions that arise as economies reform and integrate themselves into global markets, central banks become independent, but the regulatory issues and potential problems do not diminish, only change in nature.

Purely as an exercise in monetary history, it may be useful to examine the evolution of the role of one or a few central banks in their countries' financial development and regulation. But in countries where expertise relating to financial matters is limited, and demands for public institutions to be more responsive to the needs of large portions of society are growing, more work needs to be done on making central banks "independent", yet maintaining a sound regulatory regime for the financial sector, at the same time that public confidence in economic institutions is enhanced, not diminished.

While central banks become accustomed to the exigencies of independence and transparency, they must also grapple with the nuts and bolts of making and running monetary policy. During a time of rapidly evolving monetary aggregates and market conditions, this is no easy task for central bankers, but fortunately for researchers, several issues arise, and the relevant literature is flagged in sections IIIb and, especially, IVc.

Caprio, in Caprio et al (forthcoming), introduces the book by stating that "financial sector reform is more of a process than an event" (p. iii). As such, then, there cannot be a "definitive" study of the issue, only contributions to our understanding of a clearly fluid situation. By delineating the parameters of the project the way this paper has delineated them, we hope the end results add to our knowledge and understanding of this important and topical issue.

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